

Reply under 37 CFR 1.116
Expedited Procedure
Technology Center 2175

Application No.: 10/574,824

Docket No.: 06005/41114

REMARKS

Each of claims 1-7, and 9-21 remains pending and at issue in this application, with claims 1, 11, 18, and 20 being independent claims. With this Response, Applicants amend each of the independent claims. Each of the amendments finds support in the Application as originally filed and, accordingly, the amendments add no new matter. In view of the amendments above and the remarks below, Applicants respectfully request reconsideration and favorable action in this case.

35 U.S.C. § 103 Rejections

Each of claims 1-7 and 9-21 stands rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over U.S. Patent No. 6,445,963 to Blevins et al. (hereinafter "Blevins_963") in view of one or more of U.S. Patent No. 6,421,571 of Spriggs et al. (hereinafter "Spriggs"); U.S. Patent No. 5,594,858 to Blevins (hereinafter "Blevins_858"); U.S. Patent Application No. 2004/0186927 of Eryurek et al. (hereinafter "Eryurek"); U.S. Patent No. 6,826,521 to Hess et al. (hereinafter "Hess") and U.S. Patent Publication No. 2004/0153804 of Blevins (hereinafter "Blevins_804"). Each of the independent claims is rejected as unpatentable over Blevins_963 in view of one or more of Spriggs and Blevins_858.

By way of background, Blevins_963 describes advanced control blocks in process control systems. (See Blevins_963 at title block 54.) Control modules, such as the loops 132 and 134 depicted in Fig. 7 of Blevins_963, may be depicted in different views on different display screens 14A and 14B. (See, e.g., Blevins_963 at col. 17, lines 61-63.) The different views may be *created* in a manner similar to that disclosed with respect to the templates discussed in Blevins_858. (See Blevins_963 at col. 18, lines 14-20.) That is, by designing an advanced control block in the same format as other control blocks (e.g., using the template) the advanced control block can *support* the same graphical views supported by the other blocks. (See Blevins_963 at col. 4, line 66 to col. 5, line 4.)

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Blevins_858 describes a method and system for generating control templates and for process control programming. (See Blevins_858 at title block 54.) Each control template may include both programmed functions and graphical views of the functions so that a particular graphical view can be selected upon instantiation of the template. (See, e.g., Blevins_858 at col. 3, lines 42-44.) The control template may be defined as the grouping of attribute functions that are used in controlling a process and the methodology used for a particular process control function, the control attributes, variables, inputs, and outputs for the particular function and the graphical views **of the function** as needed. (Blevins_858 at col. 7, lines 10-17.) A technical advantage of some embodiments of the system is that a user can modify existing templates or create new control templates rather than relying on the standard templates furnished by the manufacturer. The created or modified templates may include attribute definitions for **creating** any desired graphical view. The user can create a **multitude** of custom graphical views from the single modified or created control template for association with particular control functions and store the created views with the control functions for later reference. (See Blevins_858 at col. 4, lines 44-55.) That is, a control template may allow multiple views to be created without the necessity of creating a separate control template from which to create each view. (See Blevins_858 at col. 8, lines 57-63.)

By contrast, the present application describes a system that allows a single process graphic display to present customized views **without** requiring creation of a **separate display** for each view. (See instant application at paragraph [0064].) By defining multiple content layers associated with each of the smart process objects making up the process graphic display, a single process graphic display may be created using the smart process objects and, by viewing the different content layers, the appropriate information for each view may be displayed, **without** the need for a designer to create each **separate view** independently. Thus, unlike past systems having separate, independent displays, the dedicated content layers are integrated portions of the objects used to define them, in the sense that the same object or objects have associated therewith the information necessary to generate all of the

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different content layers. (See id.) A smart process may represent a physical device (e.g., a pump, a tank, or a valve) or entity (e.g., piping, conduit, etc.) or a logical entity (e.g., a process area, an actuator, a control strategy, etc.). (See instant application at paragraph [0058].) A set of smart process objects configured as part of a process graphic display or a process module may be represented automatically in various views according to the selected content layer. Each of the various views may depict a graphic depiction of the device or entity associated with each smart process object, and each of the various views may depict a set of information specific to the content layer. Thus, without requiring creation of **separate displays**, an operator content layer, for example, may display health indication, a detailed information button, and a data panel for each of a set of entities (see Fig. 7), while a management content layer, for example, may display the same set of entities with a data panel for each and a trend window for the overall process or portion of the process depicted by the process graphic display (see Fig. 9).

Independent Claim 1

As amended, independent claim 1 is directed to a method of providing a user interface for a process plant and recites, in part, executing in a processor a process graphic display stored in a memory, the process graphic display (a) depicting on a display device process plant elements of the process plant, (b) operable to display on the display device each of a plurality of content layers, and (c) implementing one or more smart process objects, each of which smart process objects includes information for the plurality of content layers, wherein the information for the plurality of content layers of the process graphic display includes: (1) a set of graphic display elements common to each of the content layers, the set of graphic display elements illustrating a set of interconnected plant equipment to be illustrated in each of the plurality of content layers and (2) a set of information to be displayed in conjunction with the common set of graphic display elements for each of the different ones of the content layers, the set of information unique to the content layer.

None of Blevins_963, Spriggs, and Blevins_858, individually or in any combination, can render claim 1 unpatentable, because none of Blevins_963,

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Spriggs, or Blevins_858 discloses all of the elements recited in the claim. In particular, none of Blevins_963, Spriggs, or Blevins_858 discloses (1) an executable process graphic display depicting process plant elements and operable to display each of a plurality of content layers.

The Office relies on Blevins_963 as disclosing a plurality of content layers of a process graphic display of process plant elements. (See Office action at page 2.) Specifically, the Office alleges that Blevins_963 discloses “different views of the operation of [the] two control modules, such as an operator’s view and an engineer’s view [] depicted on the display screens 14A and 14B.” *Id.* In view of this, Applicants understand the Office to allege that the two control modules (illustrating different views) described in Blevins_963 correspond to the content layers recited in claim 1, and that the **hardware display screens** described in Blevins_963 correspond to the process graphic display recited in claim 1. Accordingly, Applicants amend claim 1 to recite that the process graphic display is executed in a processor and stored in a memory, making clear that the process graphic display recited in claim 1 cannot correspond to the display screens described in Blevins_963.

Applicants respectfully submit that Blevins_963 does not disclose any objects executable by a processor that could reasonably be said to correspond to the process graphic display recited in claim 1, because Blevins_963 does not disclose a process graphic display, **executable by a processor**, that can display **each of** the operator’s view and the engineer’s view (alleged to correspond to the content layers) described in Blevins_963. To the contrary, Blevins_963 indicates that **different views are each created** (Blevins_963 at col. 18, line 14) and that the manner for creating the views is described in Blevins_858. Blevins_858 describes that **different views** are created from a template. (See, e.g., Blevins_858 at col. 4, lines 51-53, (“...a user can create a multitude of custom graphical views from the single modified template...”)). As a person of ordinary skill in the art would readily appreciate, when one creates a plurality of objects from a template, each of the objects uses the template as a starting point, but is nevertheless **separate** from the template. (Consider, for example, when one instantiates a template document in a word

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processing application, creating a new document **based on** – but separate from – the template.) That is, Blevins_963 and Blevins_858 describe **a plurality of graphical views** implemented as **different** entities (i.e., as different objects created from a common template). Therefore, Blevins_963 and Blevins_858 do not disclose **a process graphic display operable to display each of a plurality of content layers**, as claim 1 recites.

For at least the reasons above, Applicants respectfully submit that claim 1 cannot be rendered obvious by any of Blevins_963, Blevins_858, and Spriggs, individually or in any proper combination. Accordingly, Applicants request reconsideration and withdrawal of this rejection.

Independent Claim 11

As amended, independent claim 11 is directed to a user interface system for a process plant and recites, in part, an object comprising information stored in the computer-readable medium regarding operation of the process plant element, an execution engine to utilize the object...to generate content for a plurality of content layers of a process graphic display, wherein the object information includes: a set of graphic display elements common to each of the content layers, the set of graphic display elements illustrating a set of interconnected plant equipment to be illustrated in each of the plurality of content layers and a set of information to be displayed in conjunction with the common set of graphic display elements for each of the different ones of the content layers, the set of information unique to the content layer.

For at least some of the same reasons as described above with respect to claim 1, none of Blevins_963, Blevins_858, or Spriggs, considered individually or in any combination, can render claim 11 unpatentable, because none of Blevins_963, Blevins_858, or Spriggs, even considered in view of one another discloses all of the elements recited by claim 11. In particular, no combination of Blevins_963, Blevins_858, and Spriggs, would disclose to a person of ordinary skill in the art an execution engine that utilizes object information of an object to generate content for **a plurality of content layers of a process graphic display**. As described above, no combination of Blevins_963, Blevins_858, or Spriggs discloses or suggests a

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process graphic display having a plurality of content layers, much less a plurality of content layers each of which may be depicted separately, but each of which is part of the same process graphic display. For at least this reason, Applicants respectfully submit that claim 11 is patentable over any of Blevins_963, Blevins_858, or Spriggs, individually or in any combination, and request reconsideration and withdrawal of this rejection.

Independent Claim 18

As amended, independent claim 18 is directed to a method of providing a user interface for a process plant and recites, in part, generating content for a plurality of different types of users of the user interface by processing data regarding on-line and simulated operation of the process plant; executing a display module operable to render on a display device each of a plurality of customized depictions of the process plant, and rendering a selected portion of the content in one of the plurality of customized depictions of the process plant by determining the selected portion of the content in accordance with a current user type of the plurality of different user types.

For at least some of the same reasons as described above with respect to claims 1 and 11, none of Blevins_963, Blevins_858, or Spriggs, considered individually or in any combination, can render claim 18 unpatentable, because none of Blevins_963, Blevins_858, or Spriggs, even considered in view of one another discloses all of the elements recited by claim 18. In particular, no combination of Blevins_963, Blevins_858, and Spriggs, would disclose to a person of ordinary skill in the art a display module operable to render on a display device **each of a plurality of customized depictions** of the process plant, and rendering a selected portion of the content in one of the plurality of customized depictions...by determining the selected portion of the content in accordance with a current user type, wherein the selected portion includes a set of graphic display elements common to each of the plurality of customized depictions and a set of depiction-specific display information. As described above, no combination of Blevins_963, Blevins_858, or Spriggs discloses or suggests a **display module operable to render each of a plurality of customized depictions**. Instead, the cited

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documents are directed to systems for creating multiple modules to achieve multiple display views. For at least this reason, Applicants respectfully submit that claim 18 is patentable over any of Blevins_963, Blevins_858, or Spriggs, individually or in any combination, and request reconsideration and withdrawal of this rejection.

Independent Claim 20

As amended, independent claim 20 is directed to a method of configuring a user interface for a process plant and recites, in part, creating a process graphic display of a plurality of graphic display elements representative of a plurality of process plant elements of the process plant, respectively, the process graphic display operable to display on a display device each of a plurality of content layers for selectively displaying information related to on-line and simulated operation of the process plant elements, wherein each of the plurality of content layers is used to create a customized view of the process graphic display.

For at least some of the same reasons as described above with respect to claims 1, 11, and 18, none of Blevins_963, Blevins_858, or Spriggs, considered individually or in any combination, can render claim 20 unpatentable, because none of Blevins_963, Blevins_858, or Spriggs, even considered in view of one another discloses all of the elements recited by claim 20. In particular, no combination of Blevins_963, Blevins_858, and Spriggs, would disclose to a person of ordinary skill in the art a process graphic display operable to display on a display device ***each of a plurality of content layers for selectively displaying information related to on-line and simulated operation of the process plant elements.*** As described above, no combination of Blevins_963, Blevins_858, or Spriggs discloses ***a process graphic display operable to display on the display device each of a plurality of content layers.*** Instead, the cited documents are describe systems for creating multiple modules to achieve multiple display views. For at least this reason, Applicants respectfully submit that claim 20 is patentable over any of Blevins_963, Blevins_858, or Spriggs, individually or in any combination, and request reconsideration and withdrawal of this rejection.

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Dependent Claims

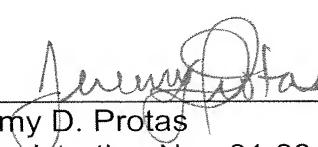
Each of the pending dependent claims depends, directly or indirectly, from one of independent claims 1, 11, 18, and 20. Thus, at least because each of the dependent claims depends from an allowable claim, Applicants submit that each of the dependent claims is patentable, and request reconsideration and withdrawal of these rejections.

CONCLUSION

Accordingly, all remaining claims are in condition for allowance for the reasons provided above. Although Applicants believe that no fees or petitions are due, the Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 13-2855 of Marshall, Gerstein & Borun, LLP under Order No. 06005/41114. Should the Examiner wish to discuss any of the foregoing comments or any claim amendments deemed needed to result in allowance, Applicants kindly request the Examiner to contact the undersigned by telephone at the number given below.

Respectfully submitted,

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